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41,088  
(Reg. No.)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of: Subramanian et al.

Confirmation No.: 6281

Serial No.: 09/816,497

Art Unit: 1743

Filed: March 26, 2001

Examiner: Dwayne K. Handy

For: Silicon Nitride Window For  
Microsampling Device and  
Method of Construction

Attorney Docket No.: Kum12Opt.Win

**RESPONSE TO OFFICIAL ACTION MAILED MAY 19, 2004**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants submit the following amendments and remarks in response to the Office Action mailed May 19, 2004, in the above identified application.

**AMENDMENTS TO THE CLAIMS** are reflected in the **LISTING OF ALL CLAIMS** that begins on page 2 of this paper.

**REMARKS** begin on page 4 of this paper.

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9/17/04

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**Listing of Claims:**

This listing of claims will replace all prior version, and listings, of claims in the application:

**Claims with Corrections and cancellations**

14-15 (cancelled).

16. (previously presented). Method of constructing a window in a silicon cuvette, comprising the steps of:

- providing a silicon substrate having a top surface and a bottom surface;
- etching a depression in the top surface of the silicon substrate defining a microsample chamber;
- depositing a silicon nitride film on the top surface of the silicon substrate and in the chamber; and
- etching a depression in the bottom surface of the silicon substrate in registration with the chamber in the top surface for exposing the silicon nitride film within the chamber to form the window.

17. (previously presented). The method of Claim 16 wherein the silicon substrate is a silicon wafer.

18. (previously presented). The method of Claim 16 wherein the silicon nitride film has a thickness of from about 0.01 of a micrometer to 5 about micrometers.

19-31. (cancelled).

32. (previously presented). Method of constructing a chamber window in a microsample chamber, comprising the steps of:

- providing a silicon substrate having a sampling side and a viewing side;
- etching a depression in the sampling side of the silicon substrate defining a microsample chamber, a needle bore, and a vent;
- depositing a silicon nitride film in at least the microsample chamber; and

etching a depression in the viewing side of the silicon substrate in registration with the microsample chamber in the sampling side for exposing the silicon nitride film within the microsample chamber to form the chamber window.

33. (previously presented). The method of Claim 32 wherein the silicon substrate has a thickness of about 500 micrometers.

34. (previously presented). The method of Claim 32 wherein the silicon nitride film has a thickness of from about 0.01 of a micrometer to about 5 micrometers.

35. (previously presented). The method of Claim 32 further comprising the step of applying an antireflective coating to the exposed silicon nitride film.

36. (previously presented). The method of Claim 35 wherein the applied antireflective coating is magnesium fluoride.

37. (previously presented). The method of Claim 16 further comprising the step of applying an antireflective coating to the exposed silicon nitride film.

38. (previously presented). The method of Claim 37 wherein the applied antireflective coating is magnesium fluoride.

39. (cancelled).

40. (cancelled).

41. (previously presented): Method of constructing a window in a silicon cuvette, comprising the steps of:

providing a silicon substrate having a top surface and a bottom surface;

etching a depression in the top surface of the silicon substrate defining a microsample chamber;

depositing a silicon nitride film in at least the chamber; and

etching a depression in the bottom surface of the silicon substrate in registration with the chamber in the top surface for exposing the silicon nitride film within the chamber to form the chamber window.

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